



CITY OF NEWPORT NEWS

Waterworks Department

TO: City and County Public Information Offices (Hampton, Newport News, James City County, York County, and Poquoson)
FROM: Cyndi Masterstaff, Public Education Coordinator
DATE: March 25, 2025
SUBJECT: Waterworks' Annual Water Quality Report

Please accept delivery of Newport News Waterworks' annual water quality report. This is a federally required document that must be distributed to our drinking water customers.

The US EPA now allows water utilities to "electronically deliver" the report, so it is accessible online at www.nnva.gov/waterqualityreport. However, paper copies are necessary for those who have no computer access or would prefer to read a printed copy.

As in previous years, we are asking your support by making copies of the water quality report available to your visitors. Customers may call Waterworks Customer Service at 757-926-1000 to request that a copy be mailed to them.

Thank you in advance for your cooperation. If you have questions or need additional copies, I can be reached at 757-926-1062.



Cyndi Masterstaff



rvd in person
3/27/25



NEWPORT NEWS
Waterworks
DEPARTMENT
Quality • Reliability • Community



ANNUAL WATER QUALITY REPORT

SUMMARIZING
TEST RESULTS
from 2024



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**LOWER
PENINSULA
SYSTEM**

ABOUT THIS REPORT

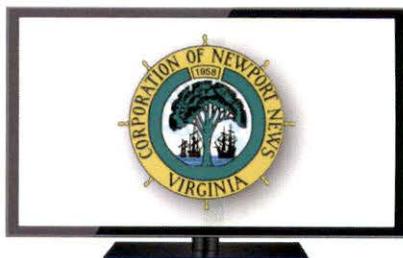
This annual water quality report or “Consumer Confidence Report” is written, prepared and distributed by the City of Newport News Waterworks Department (Newport News Waterworks) as required by the Safe Drinking Water Act. It is reviewed and approved by the Virginia Department of Health, Office of Drinking Water in Norfolk. This report explains where your water comes from, what our tests show about it, and other things you should know about your drinking water.

This report and the water quality report for our Lightfoot System are available online at www.nnva.gov/2745/Water-Quality-Report. Both online reports include additional test results. A paper copy of this report is available at all local libraries in the Waterworks service area and in city halls and county offices in our service area. If you would like to receive a copy of this report in the mail, please call Waterworks at 757-926-1000 or email wwcs@nnva.gov.

HOW CAN I GET INVOLVED?

Since Waterworks is a department of the City of Newport News, major decisions about your drinking water are made by Newport News City Council. They meet on the second and fourth Tuesday of each month at 7 p.m. and you are welcome to attend and participate. These meetings are broadcast live on the Newport News

City Channel (in Newport News - Cox channel 48 and Verizon FIOS channel 19) and streamed live on Facebook at www.facebook.com/NewportNewsTV. They also can be viewed live or on-demand by all customers in our service area at www.nnva.gov/2177/Watch.



NOTICIA EN ESPAÑOL

Este reporte contiene información importante acerca de la calidad del agua potable. Haga que alguien lo traduzca para usted, o hable con alguien que lo entienda.

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YOUR WATER UTILITY

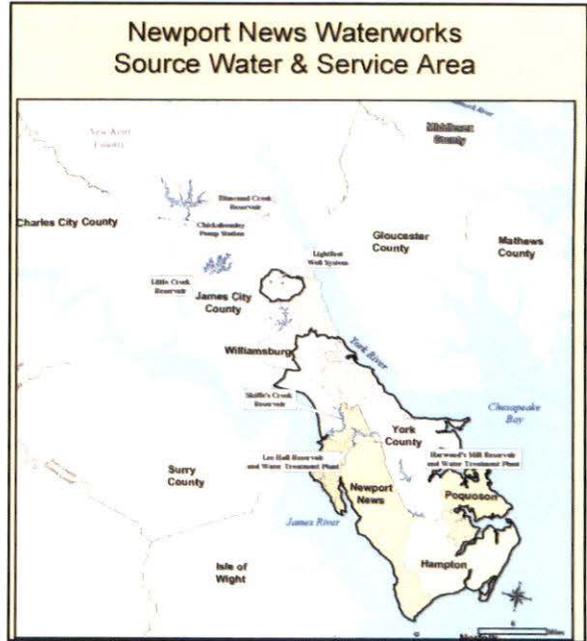
Newport News Waterworks serves as a regional water provider for five jurisdictions: Newport News, Hampton, Poquoson, York County, and part of James City County. We are committed to providing a reliable supply of high-quality drinking water to our customers. Our drinking water is treated and tested using state-of-the-art equipment and advanced procedures, and it meets or does better than state and federal standards. The bottom line: The quality of your water is excellent.



WHERE YOUR WATER COMES FROM

The primary source of your drinking water is surface water from the Diascund Creek Reservoir supplemented by the Chickahominy River, as dictated by weather patterns. Water is pumped from Diascund Creek Reservoir and/or the Chickahominy river above Walkers Dam and transferred through pipes to our reservoirs for storage.

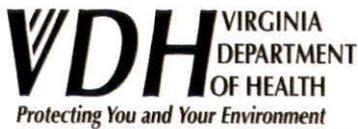
Waterworks owns and operates five reservoirs that store and supply water to our two treatment plants.

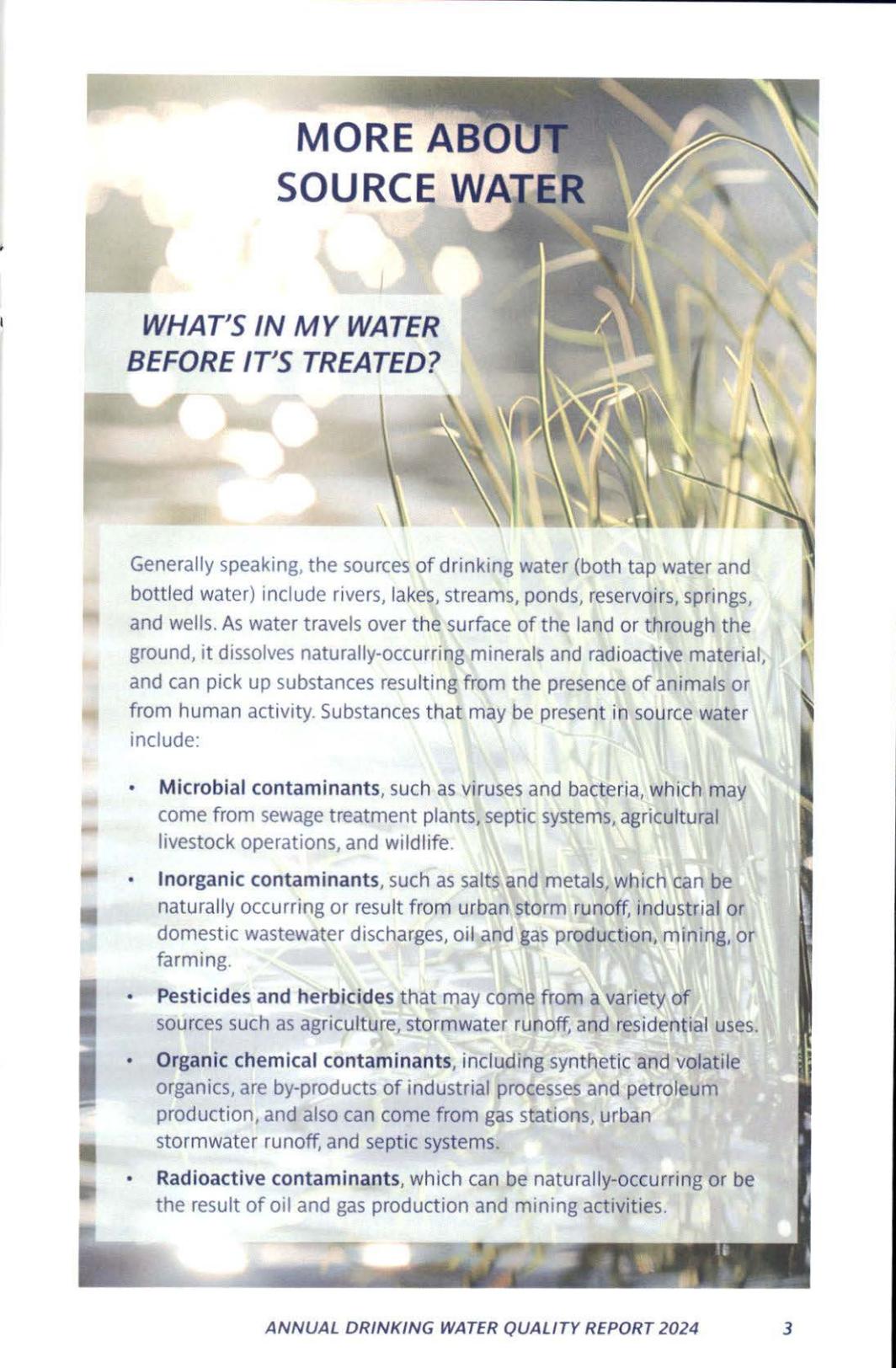


SOURCE WATER ASSESSMENT

The Virginia Department of Health (VDH) updated its Source Water Assessment of Waterworks' surface water sources in 2020. The report consists of maps showing the source water assessment area, an inventory of known land use activities, potential sources of contamination, a susceptibility explanation chart and definitions of key terms. Using the criteria developed by the state in

its approved Source Water Assessment Program, Waterworks' surface water sources are rated as relatively high in susceptibility to contamination (which is one reason why water treatment is so important). The Source Water Assessment is available from Waterworks by calling Customer Service at 757-926-1000 or you can email wwcs@nnva.gov.





MORE ABOUT SOURCE WATER

WHAT'S IN MY WATER BEFORE IT'S TREATED?

Generally speaking, the sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Substances that may be present in source water include:

- **Microbial contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- **Inorganic contaminants**, such as salts and metals, which can be naturally occurring or result from urban storm runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- **Pesticides and herbicides** that may come from a variety of sources such as agriculture, stormwater runoff, and residential uses.
- **Organic chemical contaminants**, including synthetic and volatile organics, are by-products of industrial processes and petroleum production, and also can come from gas stations, urban stormwater runoff, and septic systems.
- **Radioactive contaminants**, which can be naturally-occurring or be the result of oil and gas production and mining activities.

HOW WE TEST YOUR WATER

To ensure that tap water is safe to drink, U.S. Environmental Protection Agency (U.S. EPA) regulations limit the amount of certain contaminants in water provided by public water systems. (The U.S. Food and Drug Administration is responsible for setting these limits on bottled water.) The water quality information listed here is based upon tests conducted in 2024 by Waterworks. Samples of finished water were taken at regular intervals from specific locations (the treatment plants, residences, and businesses) across the Waterworks service area.



Every regulated substance that we detected in the water, even in the smallest amounts, is listed in the table on pages 8 and 9. The table contains the name of each substance, the highest level allowed by regulation (MCL), the ideal goals for public health (MCLG), the amount detected, the usual sources of such contamination,

and whether or not Waterworks meets the set regulation. For help understanding the tables, please see the key terms on page 12 and the footnotes at the bottom of the table. A table with the results of testing for unregulated substances can be found on page 10.

An expanded version of the tables in this report, which list additional test results, can be found on our website at www.nnva.gov/2745/Water-Quality-Report. A separate water quality report is available for our Lightfoot well system customers in York County. That report also can be found on our website. To request copies of these reports, contact Newport News Waterworks Customer Service at 757-926-1000 or email wwcs@nnva.gov.

HOW WE TREAT YOUR WATER

Untreated water is pumped to our treatment plants, where it passes through screens before aluminum sulfate (alum) and polymer are added. These chemicals cause tiny particles in the water to cling together (coagulation), making the particles easier to remove. After the water is clarified, ozone (disinfection) is added to kill micro-organisms such as bacteria and viruses. The water is then sent through filters to remove any remaining particles (filtration). Lime is added to adjust the pH, fluoride is added to prevent tooth decay, and zinc orthophosphate is added to control corrosion inside the pipes. Finally, chloramines, the secondary disinfectant, are added to maintain disinfection through the pipe system while the water travels to your home or business.



Filter gallery pipes at our Lee Hall Water Treatment Plant.

PUBLIC HEALTH PRECAUTIONS

Drinking water, including bottled water, may reasonably be expected to contain small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling U.S. EPA's Safe Drinking Water Hotline at 800-426-4791.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as those with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline 800-426-4791.

Another factor that affects water quality in your home is how "stale" the water is. When you leave your home or business for a long time, as when you take a vacation, the water in the pipes and plumbing doesn't move. When water doesn't move, bacteria can grow, and if you have lead or copper plumbing, those metals can start to seep into the water. The best thing to do is run the cold water on full blast for two minutes, then hot water until it is hot to the touch before using it for drinking or cooking. For more details visit www.cdc.gov/drinking-water/prevention/index.html

ABOUT PFAS

Recent national news about a group of synthetic chemicals known as PFAS may have some customers concerned about their drinking water. Waterworks is well aware of the issue and has been conducting water quality testing even before it became news.

PFAS stands for per- and polyfluoroalkyl substances. Thousands of PFAS chemicals can be found in many different consumer, commercial, and industrial products: non-stick cookware, waterproof and/or stain-resistant fabrics, firefighting foams, and other items. Consumer products and food are the main sources of exposure to PFAS chemicals.



When PFAS chemicals have contaminated water supplies, they may be present in drinking water. Such contamination is typically localized and is often associated with an industrial plant that has produced these chemicals or at an airfield where firefighting foam was used.

The watersheds of Waterworks' reservoirs (i.e., properties upstream of the reservoirs) do not contain industrial PFAS manufacturers. However, airports and military facilities are present.

In March 2023, the U.S. EPA proposed the National Primary Drinking Water Regulation (NPDWR) for six PFAS chemicals: PFOA, PFOS, PFNA, GenX, PFHxS, and PFBS. Finalized in early 2024, the regulation establishes a Maximum Contaminant Level (MCL) for PFOA and PFOS at 4.0 parts per trillion (ppt) each, near the detection limit of current analytical instruments. For perspective, 1 ppt—or one nanogram per liter—is equivalent to one teaspoon (5 mL) in 2,000 Olympic-sized swimming pools (2.5 million liters each). Additionally, the EPA set a combined Hazard Index of less than 1 for PFNA, GenX, PFHxS, and PFBS when measured as a mixture.

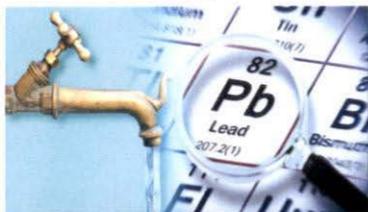
Waterworks customers can be assured that their water meets all current federal and state standards. We are committed to protecting public health and will continue to monitor this issue closely to stay ahead of potential health risks.

ABOUT LEAD

Exposure to lead in drinking water can cause serious health effects in all age groups. Infants and children can have decreases in IQ and attention span. Lead exposure can lead to new learning and behavior problems or exacerbate existing learning and behavior problems. The children of women who are exposed to lead before or during pregnancy can have an increased risk of these adverse health effects. Adults can have increased risks of heart disease, high blood pressure, kidney or nervous system problems. We have not detected lead in the treated water tested monthly at either of Waterworks' treatment plants.

Lead in drinking water primarily comes from materials and components associated with service lines and home plumbing. Newport News Waterworks is committed to providing high-quality drinking water and removing lead pipes found; however, we cannot control the variety of materials used in private home plumbing. This means you share the responsibility of protecting your family from lead exposure by identifying and removing lead materials in your home and taking precautions to reduce risks.

Waterworks takes proactive measures to reduce lead exposure. During the treatment process, we add lime to adjust the water's pH and reduce corrosion of plumbing. We also add zinc orthophosphate, a corrosion inhibitor that forms a protective layer inside pipes, preventing lead and other metals from dissolving into the water. Both lime and zinc orthophosphate are harmless to humans, especially in the quantities we use, and effectively help prevent lead contamination.



To further minimize potential lead exposure, flush your pipes before drinking tap water. This can be done by running the tap until the water becomes as cold as it will get or by performing other water-using activities like showering, doing laundry, or washing dishes. Using a filter certified by an American National Standards Institute-accredited certifier can also help reduce lead in drinking water. Always use cold water for drinking, cooking, and especially for making baby formula.

If you are concerned about lead in your water and wish to have it tested, contact Newport News Waterworks at 757-926-1000. Information on lead in drinking water, testing methods, and steps to minimize exposure is available from the Safe Drinking Water Hotline (800-426-4791) or online at www.epa.gov/safewater/lead.

WATER QUALITY TESTING RESULTS REGULATED SUBSTANCES

Contaminant	Unit	EPA's Ideal Goal (MCLG)	Highest EPA Allowed Level (MCL)	Highest Reported Result we found
INORGANIC				
Copper	ppm	0	AL = 1.3	0.101 ¹
Lead	ppb	0	AL = 15	<1.0 ¹
Fluoride	ppm	4	4	0.80
Barium	ppm	2	2	0.022
Nitrate	ppm	10	10	0.045
Nitrite	ppm	1	1	0.002
DISINFECTION BY-PRODUCTS				
Total Trihalomethanes (TTHM)	ppb	0	80	16 ²
Haloacetic Acids (HAA5)	ppb	0	60	20 ²
Total Organic Carbon (TOC) Removal		none	TT	1.18 ³
MICROBIOLOGICAL				
Turbidity	NTU	n/a	TT	0.171 ⁴
Total Chlorine (Chloramines)	ppm	4	MRDL = 4.0	3.0 ⁵
RADIOLOGICAL (FROM TREATMENT PLANTS)				
Combined Radium -226 & -228	pCi/L	0	5	0.6
Beta emitters	pCi/L	0	4	1.8

Footnotes:

Except for radiological testing and Lead and Copper, which were completed in 2022, the results reported are for samples taken in 2023. Samples taken in 2023 are part of required four-quarter or annual running averages.

(1) At least 90% of the samples were at or below this level. None of the individual samples exceeded this level. Because the MCLG for Lead and Copper is so low, we only have to test every three years. Lead and copper testing was completed in 2022. **(2)** This is the range of results for a specific location's four-quarter running average. The range numbers are the results from individual samples from 2023. The range is for samples taken in 2024. **(3)** Compliance is based on a running average of results from both water treatment plants. TOC has no adverse health effects, but can be a critical component of water quality. The data in the "Highest Result" column includes samples from 2023. The range is for samples taken in 2024. Turbidity is a good indicator of the effectiveness of our filtration system. 100% of samples were within the turbidity MCL. The running average is used. The range numbers are the results of individual samples. The data in the "Highest Result" column is for samples taken in 2024.

Contaminant	Range of Individual Test Results Low-High	Meets State & Federal Standards	Likely Source
MINERALS			
	0.007 - 0.311	YES	Corrosion of household plumbing
	<1 - 9.86	YES	Corrosion of household plumbing
	0.75 - 0.80	YES	Added to promote strong teeth
	0.022	YES	Erosion of natural deposits
	<0.020 - 0.045	YES	Erosion of natural deposits
	<0.001 - 0.002	YES	Erosion of natural deposits
BY-PRODUCTS AND PRECURSORS			
	5 - 23	YES	By-product of chlorination
	2 - 24	YES	By-product of chlorination
	0.98 - 1.80	YES	Naturally present in the environment
ORGANIC			
	0.015 - 0.171	YES	Soil runoff
	<0.02 - 6.1 ⁵	YES	Water additive (disinfectant) used to control microbes
CONTAMINANTS DETECTED IN 2016 (TESTING COMPLETED IN 2016)			
	0.2 - 0.6	YES	Erosion of natural deposits
	1.2 - 1.8	YES	Decay of natural & man-made deposits

in the table above are for samples taken in 2023-2024.

the Action Level. Because our lead and copper levels are the highest detected levels of THM and HAA are based on samples. The data in "Highest Result" column include quarter average. The range is the individual monthly percent in the formation of disinfection by-products. The (4) Turbidity is a measure of water cloudiness. It is a regulatory limit. (5) For Chloramines, a system-wide annual "Highest Result" column includes samples from 2023. The

MCLs are set at very stringent levels. To experience the possible health effects described for many regulated contaminants, a person would have to drink two liters of water at the MCL level every day for a lifetime to have a one-in-a-million chance of having a possible health effect.

WATER QUALITY TESTING RESULTS - UNREGULATED

In 2023-2024, Waterworks participated in U.S. EPA's fifth round of the Unregulated Contaminant Monitoring Rule (UCMR5). Unregulated contaminants are those that do not yet have a drinking water standard set by U. S. EPA. The purpose of monitoring for these contaminants is to help U.S. EPA decide whether they need to be regulated in the future to protect public health. The results for contaminants we detected are shown in the table below. See page 6 for more information about per- and polyfluoroalkyl substances (PFAS).

UNREGULATED CONTAMINANT MONITORING REGULATION-5 (UCMR5)					
UNREGULATED CONTAMINANTS					
Contaminants	Unit	MRL	MAX CONC.	Range of Test Results (Low-High)	Sources and Comments
Perfluorobutanoic acid (PFBA)	ppt	5.0	6.0	<5.0 - 6.0	PFAS are a group of synthetic chemicals used in a wide range of consumer products and industrial applications including: non-stick cookware, water-repellent clothing, stain resistant fabrics and carpets, cosmetics, firefighting foams, electroplating, and products that resist grease, water, and oil. PFAS are found in the blood of people and animals and in water, air, fish, and soil at locations across the United States and the world.
Perfluoropentanoic acid (PFPeA)	ppt	3.0	5.0	<3.0 - 5.0	
Perfluorohexanoic acid (PFHxA)	ppt	3.0	4.9	<3.0 - 4.9	
Perfluorohexanesulfonic acid (PFHxS)	ppt	3.0	5.0	<3.0 - 5.0	
Perfluorooctanesulfonic acid (PFOS)	ppt	4.0	6.1	<4.0 - 6.1	

ADDITIONAL INFORMATION OF INTEREST

Sodium - U.S. EPA has not set a standard for sodium in drinking water. However, sodium levels are usually low and unlikely to be a significant contribution to adverse health effects. The average level of sodium found in our treated water in 2024 was 11.0 mg/L and the range was 10.7 - 11.4. Should you have a health concern, please contact your health care provider.



Water Hardness - U.S. EPA has not set a standard for hardness. Water treated by Newport News Waterworks is considered moderately hard (4-6 grains, which is equal to 61-120 mg/L as calcium carbonate or CaCO_3) per American Society of Engineers. In 2024, the average was 63mg/L with a range of 52 - 74.

Fluoride - Fluoride is added to water to help prevent tooth decay. Newport News Waterworks adheres to drinking water regulations set by U.S. EPA and guidance provided by the Virginia Department of Health (VDH). VDH has adopted the recommendation of 0.7 mg/L, set by U.S. Department of Health and Human Services, as the optimum level of fluoride concentration in drinking water. This is the target Waterworks strives to achieve. Information about fluoridation, oral health, and current issues is available at www.cdc.gov/fluoridation.



KEY TERMS

We've defined these water-quality terms and abbreviations, some unique to the water industry, to help you better understand the test results on the following pages.

AL: Action Level - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

MCL: Maximum Contaminant Level - The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible, using the best available treatment technology.

MCLG: Maximum Contaminant Level Goal - The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

MRDL: Maximum Residual Disinfectant Level - The highest level of a disinfectant allowed in drinking water. The addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG: Maximum Residual Disinfectant Level Goal - The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.

MRL: Minimum Reporting Level - Estimate of the lowest concentration of a compound that laboratories would report as a detection.

ND: Not detected - Does not equate to zero, but refers to an amount below analytical reporting limits.

NTU: Nephelometric Turbidity Unit - A measure of water clarity. Turbidity greater than five (5) NTUs is just noticeable to the average person.

pCi/L: Picocuries per liter - A measure of radioactivity. EPA considers 50 pCi/L to be the level of concern for beta particles.

ppb: Parts per billion or micrograms per liter ($\mu\text{g/L}$). Equivalent to one penny in \$10 million.

ppm: Parts per million or milligrams per liter (mg/L). Equivalent to one penny in \$10 thousand.

ppt: Parts per trillion or nanograms per liter (ng/L). Equivalent to one penny in \$10 billion.

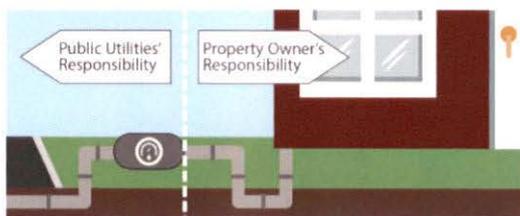
TT: Treatment Technique - A required process intended to reduce the level of a contaminant in drinking water.

Turbidity: A measure of water clarity, which serves as an indicator of the treatment facility's performance.

LEAD AND COPPER RULE

Newport News Waterworks (NNWW) is committed to protecting public health by providing clean, reliable drinking water to our customers. In compliance with the U.S. Environmental Protection Agency's Revised Lead and Copper Rule, NNWW has published an inventory map of all public and private water service line materials with the service area, available at www.nnva.gov/lead-safe.

NNWW is actively verifying both public and private service materials across the service area in an effort to remove any potential lead materials from the water distribution system. To date, NNWW has replaced any lead line found in the water distribution system. Protecting drinking water from lead sources is the



shared responsibility of Waterworks and the property owner. The public side of the service line is from the water main up to and including the water meter and is NNWW's responsibility; the private side of the service line is from the water meter to the dwelling/building and is the responsibility of the property owner. Private service lines of properties built prior to 1988 are at greater risk of containing lead materials.

Español

Esta carta contiene información muy importante sobre el material de la línea de agua potable que da servicio a su residencia o establecimiento y los pasos que usted puede seguir para reducir la posible exposición al plomo. Si tiene preguntas sobre esta información, llame a Newport News Waterworks al 757-926-1000.



CONTACT US

If you have questions or concerns about your water or water quality, please contact Waterworks Customer Service.

Here is some important contact information to keep handy:

757-926-1000 8 a.m. - 5 p.m., Mon. - Fri.	wwcs@nnva.gov monitored 8 a.m. - 5 p.m., Mon. - Fri.
Drop Box & Walk-in Payment Center 700 Town Center Drive, NN 23606 (Oyster Point City Center) 8:30 a.m. - 4 p.m., Mon. - Fri.	Drop Box & Walk-in Payment Center 2400 Washington Avenue, NN 23607 (Newport News City Hall Annex) 8:30 a.m. - 4 p.m., Mon. - Fri.

Emergency Service: 757-234-4800

For emergencies only, after normal business hours, on weekends and holidays. For emergency water cut-off, you can email us at wwcutoff@nnva.gov.

CONNECT WITH US

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Use our online portal to manage your account, pay your water bill, sign up for paperless billing, choose automatic payment options, report an outage, and request certain services.

www.nnva.gov/waterworks

Check out our website to see our extended water quality report, read fact sheets, and find other helpful information.



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Jen Cobb, P.E., Assistant Director
Bruce Utne, Production Administrator
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